IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A device to analyze ~~or reconstruct one or more~~ a signal ~~signals Ij coming~~ from ~~one or more~~ a light ~~sources,~~ source, comprising ~~at least~~:

[[•]] means [[to]] for ~~separate~~ separating the ~~signals Ij~~ signal into at least two input signals; ~~Ij1 and Ij2,~~

[[•]] at least two channels ~~V_1, V_2~~ respectively possessing a gain ~~G_1, G_2~~ and a dynamic range, ~~D_1, D_2,~~ said channels ~~having~~ are each configured to have a converter tube, at least one sensor, and ~~being adapted to obtain, at output, a signal I'j1, I'j2~~ to generate at least one output signal with ~~amplitudes Aj1(t), Aj2(t)~~ a first amplitude $A_{j1}(t)$ and a second amplitude $A_{j2}(t)$; and

[[•]] a device ~~for the processing~~ configured to process [[of]] the output signals, ~~I'j1, I'j2 adapted to memorizing~~ wherein the device configured to process includes a memory unit configured to store at least one of the first amplitude $A_{j1}(t)$ and second amplitude $A_{j2}(t)$ ~~Aj1(t), Aj2(t), of at least one~~ of the ~~two~~ output signals ~~I'j1, I'j2~~ when ~~I'j1 and/or I'j2~~ one of the output signals is below a threshold value [[S_{max}]] and ~~to determining~~ a determination unit configured to determine [[the]] an amplitude [[$A_j(t)$]] of the ~~corresponding~~ signal from the light source, [[I'j.]] and

said converter tubes are configured to convert the input signal into an electron beam that impacts a screen and said sensor is configured to sense an image on the screen and generate the output signal.

Claim 2 (Currently Amended): [[A]] The device according to claim 1, wherein the ~~signal processing~~ device configured to process further comprises: ~~works as follows: for a signal I'j corresponding to a given spatial position j~~

~~• if the amplitude $A_{j1}(t)$ is smaller than or equal to a threshold value S_{max} then the processing device stores the pair of values $(A_{j1}(t), t)$,~~

a device configured to store a pair of values $(A_{j1}(t),t)$, where t is time, if the first amplitude is smaller than or equal to the threshold value;

~~• if the amplitude $A_{j1}(t)$ is greater than the threshold value S_{max}, then the processing device stores the pair of values $(A_{j2}(t), t)$ and~~

a device configured to store a pair of values $(A_{j2}(t),t)$, where t is time, if the second amplitude is greater than the threshold value; and

[[•]] a device configured to determine, from the stored values $(A_{j1}(t), t)$, $(A_{j2}(t), t)$, ~~the device determines the~~ a corresponding ~~values~~ values of amplitude ~~$A_j(t)$ in order to obtain~~ of the signal from the light source.[[I'_j.]]

Claim 3 (Currently Amended): [[A]] The device according to ~~one of the claims~~ claims 1 or 2, wherein said means [[of]] for separating the signal ~~Ij have~~ from the light source has an attenuation coefficient K determined so that K is smaller than or equal to the dynamic range of at least one of said channels. ~~V_1, V_2.~~

Claim 4 (Currently Amended): [[A]] The device according to ~~claim 3,~~ claims 1 or 2, wherein the means [[of]] for ~~separation~~ separating ~~have a value of~~ has an attenuation coefficient K with a value that is substantially equal to the dynamic range of at least one of said channels. ~~V_1, V_2.~~

Claim 5 (Currently Amended): [[A]] The device according to ~~one of the~~ claims 1 [[to 4]] or 2, wherein the sensors are streak cameras.

Claim 6 (Currently Amended): [[A]] The device according to ~~one of the~~ claims 1 [[to 5]] or 2, comprising:

n channels having a dynamic range, [[D_n,]] where n is an integer, and

(n-1) means [[of]] for separating the signal, ~~or signals I_j.~~

7. (Canceled)

Claim 8 (Currently Amended): A method ~~to analyze~~ of analyzing a signal from a light source [[I_j]] with a wide dynamic range, ~~wherein it comprises at least the following steps:~~ comprising steps of:

[[(a)]] separating the signal to be analyzed into at least two input signals; ~~I_{j1}, I_{j2},~~

[[(b)]] making each input signal ~~I_{j1}, I_{j2}~~ go through at least one channel ~~V_1, V_2 comprising~~ including a converter tube, at least one sensor, and each of the channels having a dynamic range; ~~D_1, D_2,~~

converting the input signal into an electron beam that illuminates a screen and said sensor senses an image on the screen and generates an output signal.

[[(c)]] memorizing each output signal ~~I'_{j1} and I'_{j2}~~ coming from the two channels ~~V_1 and V_2~~ in digital form so as to obtain~~, for an index j, the~~ values of ~~the corresponding amplitudes~~ a first amplitude $A_{j1}(t)$ and a second amplitude $A_{j2}(t)$[[,]];

(d) reading [[the]] values of the first amplitude $A_{j1}(t)$ and comparing each of the values with a threshold value; [[S_{max}]]

[[(e)]] if [[Aj1(t)]] the first amplitude $A_{j1}(t)$ is smaller than the threshold value [[S_{max}]], memorizing the value of the amplitude $A_{j1}(t)$ and [[the]] a corresponding instant t, where t is time;

[[(f)]] if [[Ajl1(t)]] the first amplitude $A_{j1}(t)$ is greater than the threshold value, [[S_{max},]] then memorizing the value $A_{j2}(t)$ and [[the]] corresponding instant t, where t is time;

[[(g)]] determining the resultant amplitude of the signal from the light source [[Aj(t)]] from [[the]] pairs of values having an amplitude ~~[($A_{j1}(t)$, t); ($A_{j2}(t)$, t)].~~ ($A_{j1}(t)$, t), ($A_{j2}(t)$, t).

Claim 9 (Currently Amended): [[A]] The method according to claim 8, wherein the signal from a light source is ~~split up~~ separated into several signals, ~~I_j with j varying spatially, and~~ wherein the steps of claim 8 ~~(a) to (g)~~ are reiterated for each ~~of the values of j.~~ of the separated signals.

Claim 10 (Currently Amended): [[A]] The method according to ~~one of the claims 8 and 9~~ claims 8 or 9, wherein the threshold value [[S_{max}]] corresponds to the value of saturation of the sensor with the smallest dynamic range.

Claim 11 (Currently Amended): [[A]] The method according to ~~one of the claims 8 to 10,~~ claims 8 or 9, wherein a sensor comprises a streak camera.

Claim 12 (Currently Amended): [[A]] The method according to ~~one of the claims 8 to 10,~~ claims 8 or 9, wherein the signal from the light source ~~to be analyzed I_j~~ corresponds to [[the]] a projection of a single laser beam through a slot.

Claim 13 (Currently Amended): [[A]] The method according to ~~one of the claims 8 to 10,~~ claims 8 or 9, wherein the ~~analyzed~~ signal [[I_j]] is a linear image coming from a spectrometer or [[the]] a section of a physical phenomenon.

Claim 14 (Currently Amended): [[A]] The method according to ~~one of the claims 8 to 10,~~ claims 8 or 9, wherein the signal from a light source ~~to be analyzed I_j~~ is a signal formed by a row of optic fibers, each of the fibers producing a signal ~~having an index j~~.